

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1 1. (Currently Amended) A method for use in a wellbore, comprising:
2 causing creation of tunnels in surrounding formation of a well interval;
3 applying treatment fluid to the tunnels; and
4 creating a local transient underbalance condition in the well interval after creation
5 of the tunnels in the formation and application of the treatment fluids,
6 wherein creating the local transient underbalance condition in the well interval is
7 accomplished by using at least one of:
8 opening at least one port to a sealed container containing a low pressure,
9 the sealed container lowered into the wellbore by a carrier line;
10 communicating the wellbore interval with a choke line containing low
11 density fluid, the choke line being associated with subsea well equipment; and
12 providing a chamber of a perforating gun as a sink for fluids from the
13 wellbore interval.

1 2. (Original) The method of claim 1, wherein creating the local transient
2 underbalance condition causes a surge of fluid flow out of the tunnels to clean the tunnels.

1 3. (Original) The method of claim 1, wherein causing the creation of tunnels
2 comprises firing a perforating gun.

1 4. (Original) The method of claim 1, wherein applying the treatment fluid
2 comprises applying a matrix treatment fluid.

1 5. (Original) The method of claim 1, wherein applying the treatment fluid
2 comprises applying at least one of acid, chelant, solvent, surfactant, brine, oil, and enzyme.

1 6. (Cancelled)

1 7. (Original) The method of claim 1, wherein creation of the local transient
2 underbalance causes performance of a surge operation to clean the tunnels, the method further
3 comprising performing a fracture operation after the surge operation.

1 8. (Original) The method of claim 7, further comprising performing a gravel pack
2 operation after the fracture operation.

1 9. (Original) The method of claim 1, wherein creating the local transient
2 underbalance causes performance of a surge operation to clean the tunnels, the method further
3 comprising performing a gravel pack operation.

1 10. (Original) The method of claim 1, wherein applying the treatment fluid
2 comprises activating an applicator tool to apply the treatment fluid.

1 11. (Original) The method of claim 10, wherein activating the applicator tool
2 comprises opening at least one port of the applicator tool.

1 12. (Original) The method of claim 1, wherein applying the treatment fluid
2 comprises applying the treatment fluid in presence of an overbalance condition.

1 13. (Currently Amended) ~~The method of claim 12, further comprising~~ A method for
2 use in a wellbore, comprising:

3 causing creation of tunnels in surrounding formation of a well interval;

4 applying treatment fluid to the tunnels;

5 creating a local transient underbalance condition in the well interval after creation
6 of the tunnels in the formation and application of the treatment fluid,

7 wherein applying the treatment fluid comprises applying the treatment fluid in
8 presence of an overbalance condition; and

9 activating a perforating gun to create the overbalance condition, the overbalance
10 condition comprising a transient overbalance condition.

1 14. (Original) The method of claim 13, wherein activating the perforating gun
2 comprises activating a tubing conveyed perforating gun.

1 15. (Original) The method of claim 13, wherein applying the treatment fluid
2 comprises applying an acid to flow into the tunnels due to the presence of the overbalance
3 condition.

1 16. (Original) The method of claim 15, wherein applying the acid comprises flowing
2 a substantially equal amount of acid into each of the tunnels.

1 17. (Original) The method of claim 1, wherein applying the treatment fluid
2 comprises applying a brine to reduce surface tension within the tunnels.

1 18. (Original) The method of claim 1, wherein applying the treatment fluid
2 comprises applying a surfactant to enhance the transport of debris out of the tunnels.

1 19. (Original) The method of claim 1, wherein applying the treatment fluid
2 comprises applying a fluid to enhance cleanup of the tunnels.

1 20. (Original) The method of claim 1, further comprising applying a sequence of
2 pressure conditions in the wellbore interval, the sequence of pressure conditions comprising the
3 transient underbalance condition and other pressure conditions.

1 21. (Original) The method of claim 20, wherein applying the other pressure
2 conditions comprises applying at least one of an underbalance condition, overbalance condition,
3 and balanced condition.

1 22. – 37. (Cancelled)

1 38. (New) A method for use in a wellbore, comprising:
2 causing creation of tunnels in surrounding formation of a well interval;
3 applying treatment fluid to the tunnels; and
4 creating a local transient underbalance condition in the well interval after creation
5 of the tunnels in the formation and application of the treatment fluids,
6 wherein applying the treatment fluid comprises controlling a rate of application of
7 the treatment fluid using a time release mechanism that is part of an applicator tool lowered into
8 the wellbore.